UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,535	01/18/2001	Junming Le	0975.1005-010	1000

21005 7590 12/18/2002

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER	
CANELLA, KAREN A	
ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 12/18/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/766,535	Le et al
Examiner	**Art Unit**
Karen Canella	1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3 months* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *9*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Acknowledgment is made of applicants election of the species of "multiple sclerosis". Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicant has identified claims 1 and 2 as being readable on the elected species. However, "multiple sclerosis" is also represented in the Markush group of claim 3. Accordingly, claims 1-3 are examined on the merits.

Specification

2. The disclosure is objected to because of the following informalities:

Acknowledgment is made for applicants claim to priority based on U.S. application 09/133,119. However, the instant application is not a divisional of said application, as no restriction was made in the '119 application. Further, because the specification has been revised (i.e. the discussion of WEHI cytotoxicity) for the sake of clarity, it is no longer identical to the parent application ('119). In light of the above, amendment of the specification to indicate that this application is a CIP of the '119 application is required.

Claim Rejections - 35 USC § 112

3.The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites "acute transverse myelitisa" which is unknown in the art and not described by the specification.

Claim 3 includes "cerebellar disorder" twice.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 is drawn to a method fro treating neurodegenerative diseases comprising administering to a human at least one monoclonal anti-TNF antibody or a TNF binding fragment thereof. Claim 2 embodies the method of claim 1 wherein the neuro degenerative disease is multiple sclerosis. Claim 3 is drawn in part to the method of claim 1 wherein the neurodegenerative disease is multiple sclerosis. Multiple sclerosis is a disease recognized in the art to be characterized by numerous areas of demyelination in the central nervous system. However, three years after the claimed priority date of the instant application, the art teaches that the development of techniques for the delivery of monoclonal antibodies to the brain and spinal cord must be developed to allow for the delivery of antibodies across the blood brain barrier (Partridge, Trends in Biotechnology, 1994, Vol. 12, pp. 239-245). The instant specification describes the anti-TNF monoclonal antibodies A2 and cA2 and the treatment of patients afflicted with arthritis, and Crohn's's disease as well as sepsis, by the administration of said antibodies. The specification was not enabling as of the priority date sought, for the administration of anti-TNF fragments or TNF binding fragments thereof across the blood brain barrier. There is no evidence in the specification that the A2 or cA2 antibodies can cross the blood brain barrier, which the art teaches is impermeable to antibodies. The specification fails to identify a TNF-binding fragment of A2 or cA2 which would cross the blood brain barrier and bind to TNF in the CNS of a patient with multiple sclerosis to an extend that therapeutic efficacy would be achieved. Neither has a delivery system been disclosed for the transport of said antibodies or fragments cross the blood brain barrier. Given the state of

the art at the time of the priority filing date, the teachings of Partridge (supra) on the impermeability of the blood brain barrier to monoclonal antibodies and the necessity for specialized techniques fro the delivery of monoclonal antibodies across the blood brain barrier, and the lack of specific teachings in the specification regarding the above issues, one of skill in the art would be subject to undue experimentation in order to practice the claimed methods.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Canella whose telephone number is (703) 308-8362. The examiner can normally be reached on Monday through Friday from 8:30 am to 6:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa, can be reached on (703) 308-3995. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Karen A. Canella, Ph.D.
Patent Examiner, Group 1642
December 16, 2002